

Chez Pierre

Presents ...

Monday, November 17, 2014

12:00pm

MIT Room 4-349



Chez Pierre Seminar

Eduardo Fradkin

University of Illinois at Urbana-Champaign

**”Pair Density Waves and High T_c
Superconductivity”**

Experiments in LBCO and other members of the Lanthanum family of high T_c cuprates have suggested that the state that compete with d-wave superconductivity is a modulated version of that state which my collaborators and I have called the pair-density-wave (PDW) state. The recent discovery of charge order in other families of high T_c superconductors (e.g. YBCO, BSCCO and others) have brought to the fore the origin and relation between the observed charge order and d-wave superconductivity. I will present an overview of the evidence for this stat, of some of the theoretical evidence supporting it, and of its relation with the concept of intertwined orders. I will also review the evidence for PDW-like superconducting states in 1D systems which turn out to be topological.